

Amendments to the Claims:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1.-10. (Canceled)

11. (Currently Amended) A honeycomb structure comprising:

a plurality of honeycomb segments each of which has a plurality of cells surrounded and defined by porous partition walls to form a honeycomb structure as a whole, and

each of the cells functions as a passage of a fluid, and is arranged to be parallel to each other in a central axis direction of the honeycomb structure,

wherein each segment is bonded integrally at least at its two outer partition walls to other adjacent segments by a bonding material in a direction normal to the central axis direction to form the honeycomb structure,

the bonding material containing a ceramic as a main component, and a foamed resin having an average particle diameter of ~~25 to 250 μ m~~ 15 to 250 μ m and being contained in 25 to 65 volume percents with relation to total volume of the bonding material, the foamed resin promoting coatability and spreadability of the bonding material by virtue of rollability of the foamed resin,

whereby the bonding material with the foamed resin has less suppression in shrinkage caused by dehydration, and is substantially free from peeling and cracking.

12-14. (Canceled)

15. (Previously Presented) A honeycomb structure according to Claim 11, wherein the bonding material further contains at least one member selected from the group consisting of inorganic particles, an oxide fiber and a colloidal oxide.

16. (Previously Presented) A honeycomb structure comprising:

a plurality of honeycomb segments each of which has a plurality of cells surrounded and defined by porous partition walls to form a honeycomb structure as a whole;

each of the cells functions as a passage of a fluid, and is arranged to be parallel to each other in a central axis direction of the honeycomb structure, each segment being bonded integrally at least at its two outer partition walls to other adjacent segments by a bonding material containing a ceramic as a main component;

an outer wall formed of a plurality of segments bonded with the bonding material, the outer wall being ground; and

a surface coat layer formed on an outer surface of the outer wall,

wherein the surface coat layer has a coating material containing a ceramic as a main component, and a foamed resin having an average particle diameter of 15 to 250 μm and being contained in 25 to 65 volume percents with relation to total volume of the coating material, the foamed resin promoting coatability and spreadability of the coating material and promoting suitable viscosity of the coating material for coating,

whereby the surface coat layer is substantially free from small holes, cracks and fractions in its surface.

17-19. (Canceled)

20. (Previously Presented) A honeycomb structure according to Claim 16, wherein the coating material further contains at least one member selected from the group consisting of inorganic particles, an oxide fiber and a colloidal oxide.

21. (Previously Presented) A honeycomb structure according to claim 11, wherein an amount of the foamed resin used in the bonding material is 0.5 to 4 percents by weight.

22. (Previously Presented) A honeycomb structure according to claim 11, wherein the bonding material has a bonding strength of 1.2 MPa or more.

23. (Previously Presented) A honeycomb structure according to claim 16, wherein an amount of the foamed resin used in the coating material is 0.5 to 4 percents by weight.

24. (Previously Presented) A honeycomb structure according to claim 16, wherein the coating material has a bonding strength of 1.2 MPa or more.